

Amendments to the Specification:

Please amend the specification as follows.

On page 9, please replace the paragraph which begins on line 8 with the following amended paragraph:

The channel estimator can be implemented with a plurality of channel estimators according to whether or not a Tx-diversity (i.e., a transmission diversity) is used. If the Tx-diversity is not used, the channel estimator can be implemented with only one channel estimator. Otherwise, if the Tx-diversity is used, a plurality of channel estimators equivalent to the number of antennas used [[are]] is needed. However, the channel estimator has the same configuration as Fig. 1, irrespective of the use of Tx-diversity. Referring to Fig. 1, a complex conjugate pattern generated from the complex conjugate pattern generator 120 contained in the channel estimator may be one or more patterns according to the use of Tx-diversity. If Tx-diversity is not provided, only one antenna is used, such that only one symbol pattern is generated. If Tx-diversity is adapted using a plurality of antennas, a plurality of symbol patterns are adapted to discriminate among the plurality of antennas. The symbol patterns are adapted to discriminate among the antennas so as to separate each pilot signal from orthogonal pilot signals for every antenna, allowing individual symbol patterns associated with individual antennas to be orthogonal to each other.

For Table 1, please replace the table with the following amended table:

[[A]]a	b = 1-a	Cutoff frequency (3dB)	Transfer speed
1/4	3/4	2024 Hz	1093 km/h
1/2	1/2	862 Hz	465 km/h
3/4	1/4	346 Hz	197 km/h
7/8	1/8	159 Hz	86 km/h

On page 15, please replace line 14 with the following amended line:

Fig. 8 is a graph illustrating an example of a mapping-example of filter

On page 15, please replace line 25 with the following amended line:

Fig. 10 is a graph illustrating an example of a mapping-example of filter